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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,188	12/22/2000	Timothy D. Jordan	0325.00391	5567
21363	7590	11/23/2004	EXAMINER	
CHRISTOPHER P. MAIORANA, P.C.			BAYARD, EMMANUEL	
24840 HARPER			ART UNIT	PAPER NUMBER
ST. CLAIR SHORES, MI 48080			2631	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/747,188

Applicant(s)

JORDAN ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

This is in response to amendment filed on 7/18/04 in which claims 1-16 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection therefore this case is made final.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 6-9 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ghoshal U.S. patent No 5,493,243.

As per claims 1, 9 and 14, Ghoshal discloses a method for synchronizing a clock signal to a data signal, comprising the steps of: (A) an detecting an edge of said data signal (see fig.4 elements 38, 40 and col.5, lines 5-13); a counter is the same as the claimed (generating a numeric representation of a magnitude of phase error between the edge of said data signal and said clock) (see figs.2, 4 element 30 and col.3, lines 53-67 and col.4, lines 26-36 and col.5, lines 5-28); (B) a frequency synthesizer is the same as the claimed (determining whether said counter (numeric representation) is within a predetermined zone) (see figs. 1-2, 5 element 14 and col.3, lines 60-65); and (B) if said counter (numeric representation) is not within said predetermined zone, adjusting said clock signal towards said position of said edge (see col.2, lines 2-7 and col.3, lines 40-50 and col.4, lines 21-25, lines 49-67 and col.6, lines 20-33 and col.8, lines 31-35).

Art Unit: 2631

As per claim 2, Ghoshal does include sampling a number of clock signals using said data signal (see col.4, lines 38-44).

As per claim 6, Ghoshal does include incrementing a value in response to a first polarity (see col.3, lines 53-60).

As per claim 7, Ghoshal does include the sub-step of decrementing said value in response to a second polarity (see col.3, lines 53-67)

As per 8, Ghoshal does include the sub-step of selecting a number of clock phases (see col.6, lines 3-4) based upon said value.

As per claim 11, Ghoshal does include incrementing/ decrementing a logic circuit configured to adjust a value response (see col.5, lines 15-17)

As per claim 12, Ghoshal does include comprises a plurality of phases (see fig.1 and col.1, lines 20-40).

As per claim 13, Ghoshal does include selects one or said plurality of phases as a system clock (see col.6, lines 3-4).

Value.

As per claim 15, Ghoshal teaches a method for synchronizing a clock signal to a data signal, comprising the steps of: (A) detecting an edge of a data signal (see fig.4 elements 38, 40 and col.5, lines 5-13); (B) determining a relative polarity and phase offset magnitude as a numeric representation of said edge of said data signal relative to said clock signal (see col.8, lines 20-23); (C) if said magnitude is less than a predetermined value, repeating steps and (B) (see col.4, lines 20-24, 48-57 and col.5, lines 15-27) ;(D) said magnitude is greater than a predetermined value, determining a polarity of said magnitude (see col.4,

Art Unit: 2631

lines 20-24, 48-57 and col.5, lines 10-27); (E) adjusting said clock (see col.2, lines 2-7 and col.3, lines 40-50 and col.4, lines 21-25, lines 49-67 and col.6, lines 20-33 and col.8, lines 31-35) counter-clockwise if said polarity is positive and clockwise said polarity is not positive is inherent.

As per claim 16, Ghoshal inherently teaches generating an update accumulated.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghoshal U.S. Patent No 5,493,243 in view of Julyan et al U.S. Patent No 6,081,561.

As per claim 3, Ghoshal teaches all the features of the claimed invention except the sub-step encoding a position of said edge.

Julyan et al teaches encoding a position of said edge (see col.1, lines 60-62 and col.2, lines 3-5, 45-60).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Julyan et al into Ghoshal as to include indications of the set of samples in which the detected edges occurred as taught by Julyan (see col.2, lines 1-5).

As per claim 4, Ghoshal teaches all the features of the claimed invention except comparing an encoded position of said edge to a predetermined value.

Julyan et al teaches combining an encoded position of said edge to a predetermined value (see col.1, lines 65-67 and col.2, lines 53-67).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Julyan et al into Ghoshal as to be responsive to a counter to encode in the digital phase signal the value in the counter when the phase detector detects an edge as taught by Julyan (see col.2, lines 55-60).

As per claims 5 and 10, Ghoshal teaches all the features of the claimed invention except comparing storing said encoded position.

Julyan et al teaches storing said encoded position (see col.2, lines 46-50).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Julyan et al into Ghoshal as to give a result dependent on whether the samples of that pair are the same or different as taught by Julyan (see col.2, lines 55-60).

### ***Conclusion***

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

Art Unit: 2631

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dishon et al 4,862,411 teaches a multiple copy data mechanism.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (3:PM-10PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/20/04

Emmanuel Bayard  
Primary Examiner  
Art Unit 2631

  
**EMMANUEL BAYARD**  
**PRIMARY EXAMINER**